**REMARKS/ARGUMENTS:**

The Office Action dated may 30, 2007 made the following assertions:

- Claims 44-50 are directed to a non-elected invention and distinct from other claims;
- Claim 3 is rejected under 35 USC 112, 2nd para for improper dependency;
- Claims 1-2, 4, 6-19 and 42-43 are rejected under 35 USC 103(a) as obvious over JP 2003-008180 in view of US 3,772,075 (Tarnopol) and either US 3,791,872 (Strum) or JP 09-059,778.

Claims 44-50 are canceled. Claim 3 is amended to depend from claim 42.

Claim 42 and other dependent claims are amended with the subject matter of claim 17 (now canceled) to recite that the substrate is a thermoplastic material. It is noted that the remarks section of the office action did not specify particulars of the rejection to claims 16-19.

Claim 42 had been improperly rejected in the final office action dated October 13, 2006, which was affirmed in the Examiner's Interview Summary dated November 13, 2006 and also in the summary by the undersigned representative dated December 13, 2006. Now the Applicants have undertaken the expense of an RCE to cure the patent office's error, only to have the apparatus claims added in that RCE denied examination and certain dependent claims rejected without specific remark to which the Applicant might fully respond. The following remarks are in this context.

Claim 42 recites five distinct materials: thermoplastic substrate, carrier material, seeding substance, metallic material, and binder material. The carrier material carries the seeding substance and the binder material. The seeding substance allows application of the metallic material to it. The binder material is for fixing the seeding substance onto the thermoplastic substrate. The apparatus claims have been summarily denied examination by the cited office action, but the recited functional language of method claim 42 cannot be assumed away in citing to a prior art product alone. The current rejection fails to make obvious the claimed functions, and amended claim 42 is therefore patentable over any combination of cited art as detailed below with particularity.

JP 2003-008180 recites a three dimensional molding 1 on which a bonding film 3 containing a catalyst is disposed. A circuit pattern 4 is formed on the bonding film. Assuming as appears obvious that the catalyst allows the circuit pattern 4 to stick to the film 3, then JP 2003-008180 lacks disclosure of a binder material as in claim 42. Assuming also as one must that the end result of JP 2003-008180 is a useful end product, there is no need for a binder material since the bonding film 3 already attaches to the molding 1.

The Applicant has detailed at length just how far afield Tarnopol is from the present invention (see Amendment dated July 19, 2006). Assuming arguendo that one looking for teachings in the field of forming a housing of a mobile phone as in dependent claim 1 would turn to prior art describing how a defog/de-ice heating element is made onto an automobile window, then such a person would see that Tarnopol teaches a glass sheet, a ceramic frit coating the glass sheet, and a metallic coating applied over the ceramic frit (col. 3 lines 9-40 as cited). The ceramic frit includes a small amount of sensitizing metal. The office action asserts against dependent claims 2 and 6 that the organic solvent component of the frit is an ink and the sensitizing metal component are metallic particles, so the frit minus the metal is asserted against the seeding substance of claim 42. But the catalyst of JP 2003-008180 was also asserted against the seeding substance; neither reference alone or in combination teaches a binder material. Tarnopol needs no binder material because at col. 3 lines 31-36 of Tarnopol, also cited by the office action, it is explicitly disclosed that:

> "The frit coated glass sheets are heated to fuse the ceramic frit-abrasive powder mixture to the glass, to reduce the organic noble metal compounds to the noble metals and to evaporate the viscous liquid vehicle in which the ceramic and abrasive particles and noble metal atoms are suspended."

Tarnopol fuses the frit to the glass by heat, not by a binder *material*, so no binder material is necessary. JP 2003-008180 fixes the film 3 to the molding 1 without a binder material. The ceramic particles of Tarnopol's frit are not a "binder material for fixing the seeding substance on the substrate" as claim 42 recites, unless ceramic melts in Tarnopol's fusing step before the metal particles do. Since Tarnopol's frit is set upon a glass sheet which is itself a ceramic, that does not appear a viable interpretation of Tarnopol.

Against claim 4 the office action asserts that the 'resinous oil' of Tarnopol is analogous to the binder material of claim 42. This cannot sustain, for the 'resinous oil' of Tarnopol evaporates during the heating stage as detailed above. If the 'resinous oil' were the binder material, then

Tarnopol has no carrier material but clearly in its description, quoted above, the purpose of the 'viscous liquid' is to carry the ceramic and metal particles. No teaching of Tarnopol is seen to suggest that the 'resinous oil' is "for fixing the seeding substance on the substrate" as claim 42 recites. It cannot, for in Tarnopol the oil evaporates during the heating step while the sensitizing metal, reduced to its noble metals, is still attached to Tarnopol's glass sheet. Were it otherwise, then evaporation of the oil as 'binding material' would cause the Tarnopol noble metals to be unattached to the glass. Further, considering claim 42 now recites a thermoplastic substrate, a resinous oil would not serve as a proper binding material to that substrate even if Tarnopol used it for that function with the glass sheet.

Strum is related to making electrodes for electrochemical cells. Like Tarnopol, this is far afield from forming a pattern on a housing of a mobile telephone as in claim 1 and so Sturm is not combinable with any other reference against claim 1 at least. Assuming arguendo that Strum is relevant to one of ordinary skill, the office action cites to the binder material of the Strum abstract as being acrilonitrile-butadiene styrene. Other examples are at col. 2 lines 1-4.

However, no motivation is seen for modifying either or both of JP 2003-008180 and Tarnopol with these binder materials of Strum, and the office action asserts none. As above, there is no need to modify either of those references by adding a binder material because there is no lack of adhesion between the film 3 and the mold 1 of JP 2003-008180, or of the frit and the glass sheet of Tarnopol after heating. It is noted that addition of a binder material to Tarnopol would not result in elimination of the heating step, since rapidly cooling the heated glass sheet tempers the glass (Tarnopol at col. 3 lines 36-38) and heating causes the glass sheet to sag in order to conform to a desired shape (Tarnopol at col. 10 lines 32-35). Both tempering and conforming shape are necessary in Tarnopol and not avoided by adding a binder material. Modifying Tarnopol to add the binder of Sturm adds an unnecessary material/step with no benefit seen, and motivation to do so is neither asserted in the office action nor seen in either reference.

More substantively, the purpose of the binders recited in Sturm is to render the fibrous materials (e.g., asbestos paper, fiberglass, cellulose foils; col. 2 lines 51-54), that are used as a cover layer on an electrode, resistant to the electrolyte liquid used in the electrochemical cell on which the electrode is disposed yet still being at least partly hydrophobic (Sturm at col. 2

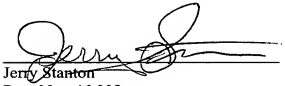
lines 42-61). Sturm's binder materials are described for use *only* with fibrous (and therefore porous) cover layer materials. Claim 42 recites that the substrate is a thermoplastic substrate, and Sturm's electrodes are not seen to be operable with a thermoplastic cover layer. Sturm has no teachings relevant to a non-porous substrate such as a thermoplastic one.

Finally, JP-09-059,778 is cited as an alternative to Sturm. The binder of JP-09-059,778 is a liquid organic binder wherein a nonconductive powder carries a metal catalyst for pretreating a surface for electroless plating. What is termed the binder in this reference can only be analogized to the carrier material of claim 42, as the abstract of this reference clearly recites that it is an organic solvent solution or an aqueous emulsion. Additionally, this reference fails to teach or suggest any of the binder materials specifically recited in claim 42.

Claim 18 is seen to be clearly beyond any disclosure of the cited references, and the office action asserts no particulars against it in the remarks section.

Other dependent claims are not argued individually, though this is not suggest agreement with their rejection. At least for their dependency from claim 42 they are each seen to be allowable. The Applicants hereby request that claim 42 and its dependent claims 1-2, 4, 6-19 and 43 now be passed to issue.

Respectfully submitted:



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